

THIRD QUARTER 2024
SITE MONITORING DATA
MATSUSHIMA-PM K 2-1 FACILITY
ECMC SPILL TRACKING #327037
ECMC REMEDIATION #29940

Prepared for:



2115 117th Avenue
Greeley, CO 80631

Prepared by:



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TABLE 1
GROUNDWATER ELEVATION DATA
NOBLE ENERGY, INC. - MATSUSHIMA-PM K 2-1



Monitoring Well ID	Date	Top of Casing Elevation (ft. AMSL)	Total Depth (ft. BTOC)	Depth to Water (ft.) ⁽¹⁾	Depth to LNAPL (ft.) ⁽¹⁾	LNAPL Thickness (ft.)	Groundwater Elevation* (ft. AMSL)
BH01	12/21/23	4666.56	13.16	6.23	ND	ND	4660.59
BH01	03/06/24	4666.56	13.25	6.69	ND	ND	4660.13
BH01	06/03/24	4666.56	13.20	3.61	ND	ND	4663.21
BH01	09/16/24	4666.56	13.19	3.77	ND	ND	4663.05
BH02	12/21/23	4667.03	13.38	6.70	ND	ND	4660.55
BH02	03/06/24	4667.03	13.31	7.14	ND	ND	4660.11
BH02	06/03/24	4667.03	13.56	4.07	ND	ND	4663.18
BH02	09/16/24	4667.03	13.36	4.58	ND	ND	4662.67
BH03	12/21/23	4666.71	13.35	6.40	ND	ND	4660.55
BH03	03/06/24	4666.71	13.37	6.86	ND	ND	4660.09
BH03	06/03/24	4666.71	13.35	3.79	ND	ND	4663.16
BH03	09/16/24	4666.71	13.41	4.00	ND	ND	4662.95
BH04	12/21/23	4666.20	13.36	5.79	ND	ND	4660.63
BH04	03/06/24	4666.20	13.39	6.27	ND	ND	4660.15
BH04	06/03/24	4666.20	13.32	3.19	ND	ND	4663.23
BH04	09/16/24	4666.20	13.41	3.36	ND	ND	4663.06
BH05	12/21/23	4667.24	13.66	4.89	ND	ND	4661.61
BH05	03/06/24	4667.24	13.59	5.30	ND	ND	4661.20
BH05	06/03/24	4667.24	13.65	2.26	ND	ND	4664.24
BH05	09/16/24	4667.24	13.61	2.51	ND	ND	4663.99

Notes:

* Groundwater elevation was corrected for product thickness (when present) using the following calculation:

Groundwater elevation = (TOC Elevation - Measured Depth to Water)+(LNAPL Thickness in Well x LNAPL Relative Density)

LNAPL relative density was estimated to be approximately 0.75

1. Depth to water measurements were collected from top of casing and adjusted using survey data to reflect depth of water from ground surface.

Definitions:

ft. = Feet

BTOC = Below top of casing

ND = No LNAPL detected

AMSL = Above mean sea level

LNAPL = Light non-aqueous phase liquid

TABLE 2
GROUNDWATER ANALYTICAL DATA
NOBLE ENERGY, INC. - MATSUSHIMA-PM K 2-1



Monitoring Well ID	Date	Benzene (µg/L)	Toluene (µg/L)	Ethylbenzene (µg/L)	Total Xylenes (µg/L)	Naphthalene (µg/L)	1,2,4 - TMB (µg/L)	1,3,5 - TMB (µg/L)	1-M (µg/L)	2-M (µg/L)	Total Dissolved Solids (mg/L)	Chlorides (mg/L)	Sulfates (mg/L)
ECMC Standard⁽¹⁾		5	560	700	1,400	140	67	67	1.1⁽²⁾	3.6⁽²⁾	1.25 X Background	250	250
BH01	12/21/23	3.3	<1.0	<1.0	<2.0	<1.0	<1.0	<1.0	<0.500	<0.500	758	125	274
BH01	03/06/24	2.7	<1.0	<1.0	<2.0	<1.0	<1.0	<1.0	<0.500	<0.500	823	116	320
BH01	06/03/24	<1.0	<1.0	<1.0	<2.0	<1.0	<1.0	<1.0	<0.500	<0.500	816	141	277
BH01	09/16/24	<1.0	<1.0	<1.0	<2.0	<1.0	<1.0	<1.0	<0.500	<0.500	595	101	208
BH02	12/21/23	<1.0	<1.0	<1.0	<2.0	<1.0	<1.0	<1.0	<0.500	<0.500	797	127	265
BH02	03/06/24	<1.0	<1.0	<1.0	<2.0	<1.0	<1.0	<1.0	<0.500	<0.500	834	118	261
BH02	06/03/24	<1.0	<1.0	<1.0	<2.0	<1.0	<1.0	<1.0	<0.500	<0.500	808	148	307
BH02	09/16/24	<1.0	<1.0	<1.0	<2.0	<1.0	<1.0	<1.0	<0.500	<0.500	617	109	228
BH03	12/21/23	<1.0	<1.0	<1.0	<2.0	<1.0	<1.0	<1.0	<0.500	<0.500	779	122	265
BH03	03/06/24	<1.0	<1.0	<1.0	<2.0	<1.0	<1.0	<1.0	<0.500	<0.500	859	120	258
BH03	06/03/24	<1.0	<1.0	<1.0	<2.0	<1.0	<1.0	<1.0	<0.500	<0.500	802	138	303
BH03	09/16/24	<1.0	<1.0	<1.0	<2.0	<1.0	<1.0	<1.0	<0.500	<0.500	566	101	216
BH04 ⁽³⁾	12/21/23	<1.0	<1.0	<1.0	<2.0	<1.0	<1.0	<1.0	<0.500	<0.500	809	118	252
BH04 ⁽³⁾	03/06/24	<1.0	<1.0	<1.0	<2.0	<1.0	<1.0	<1.0	<0.500	<0.500	820	116	252
BH04 ⁽³⁾	06/03/24	<1.0	<1.0	<1.0	<2.0	<1.0	<1.0	<1.0	<0.500	<0.500	793	137	278
BH04 ⁽³⁾	09/16/24	<1.0	<1.0	<1.0	<2.0	<1.0	<1.0	<1.0	<0.500	<0.500	609	107	226
BH05 ⁽³⁾	12/21/23	<1.0	<1.0	<1.0	<2.0	<1.0	<1.0	<1.0	<0.500	<0.500	824	130	274
BH05 ⁽³⁾	03/06/24	<1.0	<1.0	<1.0	<2.0	<1.0	<1.0	<1.0	<0.500	<0.500	815	117	270
BH05 ⁽³⁾	06/03/24	<1.0	<1.0	<1.0	<2.0	<1.0	<1.0	<1.0	<0.500	<0.500	801	135	280
BH05 ⁽³⁾	09/16/24	<1.0	<1.0	<1.0	<2.0	<1.0	<1.0	<1.0	<0.500	<0.500	579	104	215

Notes:

⁽¹⁾ Groundwater standards referenced from 2 CCR 404-1, Table 915-1 (January 15, 2021).

⁽²⁾ Groundwater standards reference from USEPA Regional Screening Level (RSL) Resident Tapwater Table (TR=1E-06, HQ=0.1) November 2022

⁽³⁾ Monitoring well used for background inorganic concentrations

Definitions:

< = Analytical result is less than the indicated laboratory reporting limit

ECMC = Colorado Energy and Carbon Management Commission

USEPA = United States Environmental Protection Agency

µg/L = Micrograms per liter

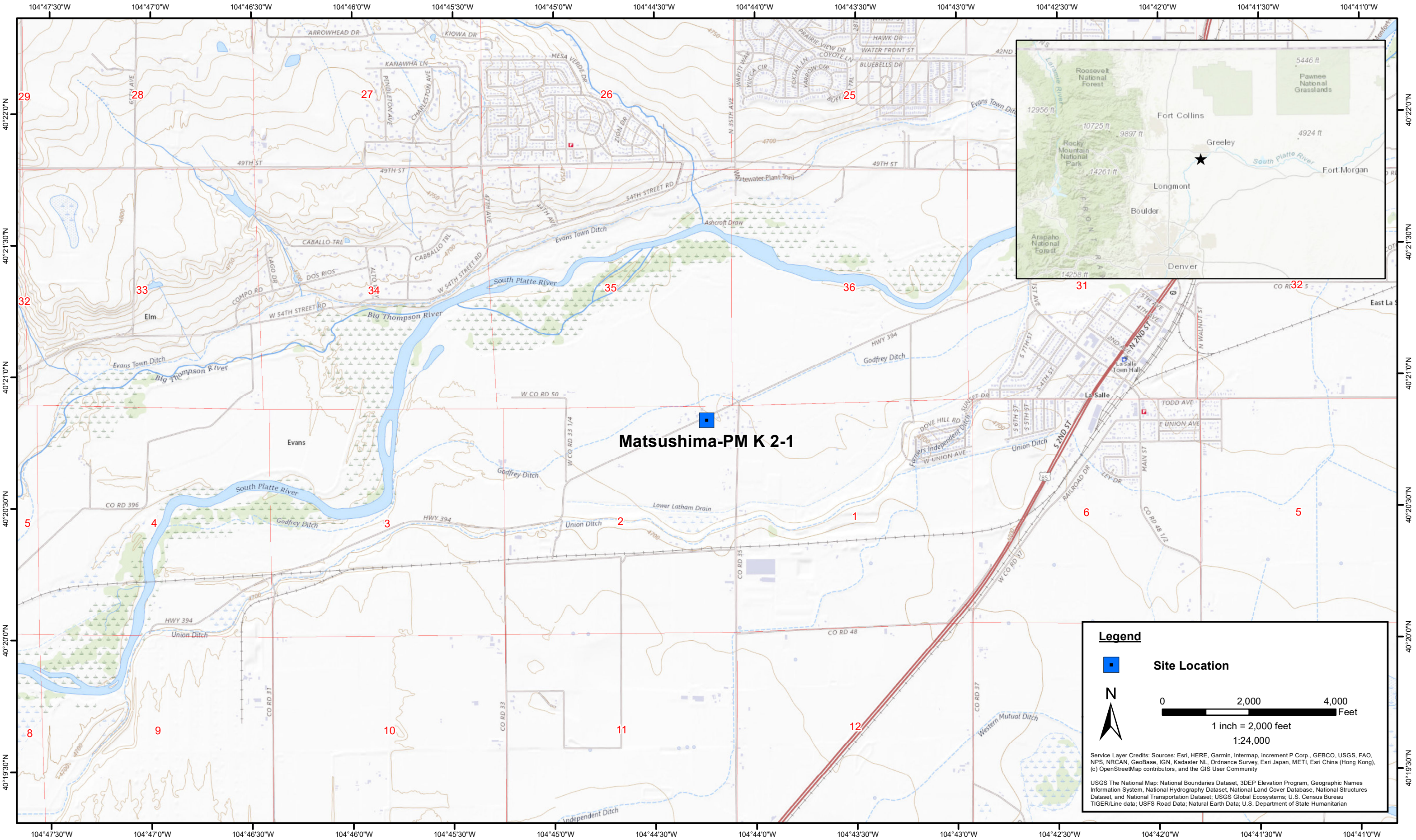
mg/L = Milligrams per liter

1,2,4 - TMB = 1,2,4 - trimethylbenzene

1,3,5 - TMB = 1,3,5 - trimethylbenzene

M = Methylnaphthalene

TDS = Total Dissolved Solids



DATE:
October 2023

DESIGNED BY:
J. Whritenour

DRAWN BY:
L. Reed

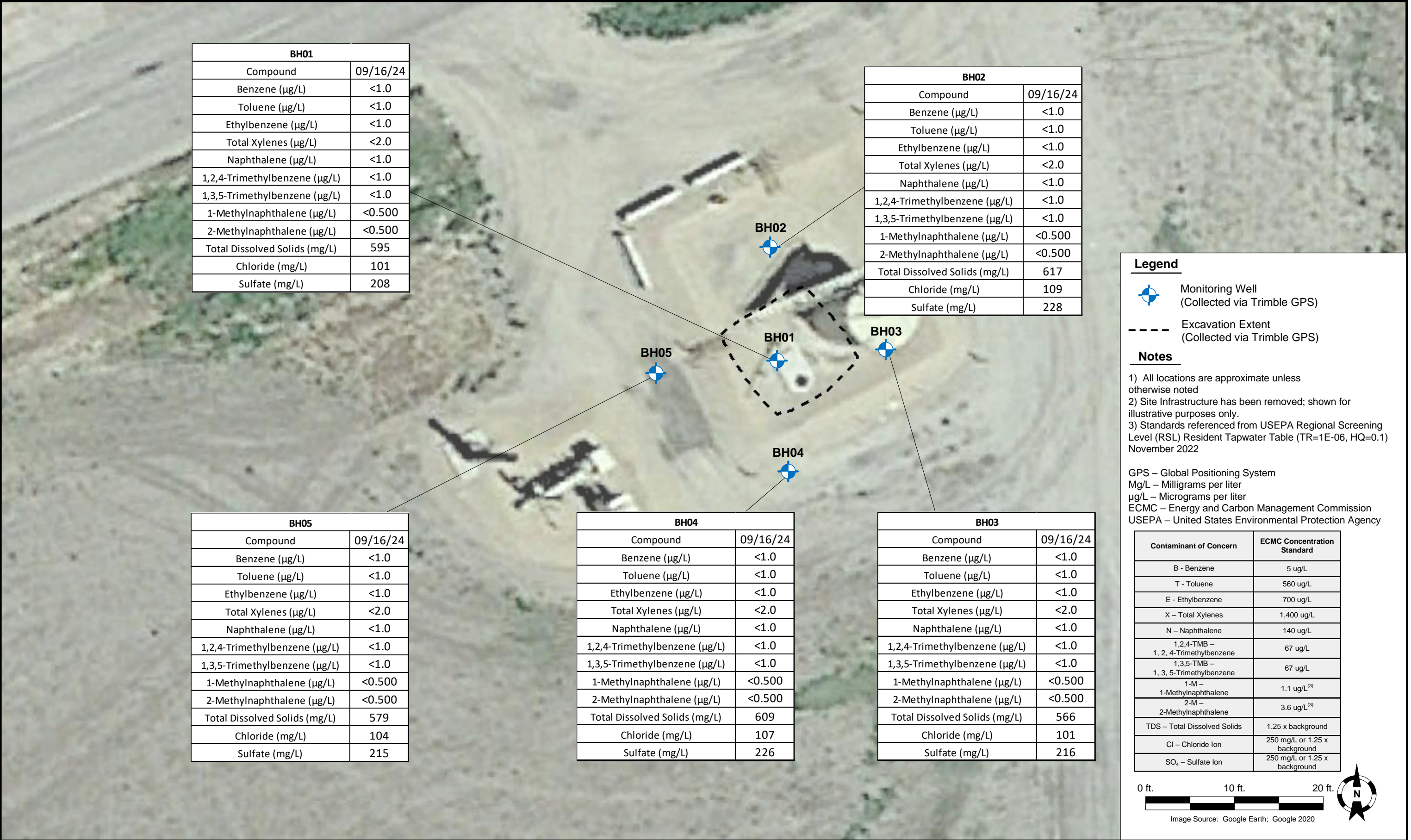


Tasman, Inc.
6855 W. 119th Ave
Broomfield, CO 80020


Noble Energy, Inc - DJ Basin
Matsushima-PM K 2-1
NENE, Section 2, Township 4 North, Range 66 West
Weld County, Colorado

Site Location Map

Figure
1





DATE: September 2024	 TASMAN Tasman, Inc. 6855 W 119 th Ave. Broomfield, CO 80020	Noble Energy, Inc. – DJ Basin Matsushima-PM K 2-1 NENE, Section 2, Township 4 North, Range 66 West Weld County, Colorado	Groundwater Potentiometric Surface Contour Map (09/16/2024)	FIGURE 3
DESIGNED BY: JW				
DRAWN BY: J. Woffinden				